

19-02-2001

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ART 34 AMDT.

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CLAIMS

1. A method of detecting an article identification tag (30) having at least one electrically conductive member (31-3n), wherein, for each of said at least one member (31-3n), an alternating electric current is caused to flow through said member, a frequency of the alternating electric current is varied, and a corresponding variation in impedance of said member is monitored, characterized by
5 the steps of
 - detecting a discontinuity in said variation in impedance; and
 - detecting the frequency of the alternating electric current, at which frequency said discontinuity appears.
- 15 2. A method according to claim 1, wherein each of said at least one electrically conductive member (31-3n) has one of a predetermined diameter, a predetermined electrical resistivity or a predetermined magnetic permeability, and wherein said predetermined diameter, resistivity or permeability is mapped to information about an identity of the tag (30).
- 25 3. A method as in claim 1 or 2, wherein the alternating electric current is induced in said at least one electrically conductive member (31-3n) by exposing the tag (30) to an alternating electromagnetic field.
- 30 4. A method as in any preceding claim, wherein the alternating electric current is induced in said at least one electrically conductive member (31-3n) by exposing the tag (30) to a magnetic field.

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5. A method as in any preceding claim, wherein said at least one electrically conductive member (31-3n) is an elongated metallic member having the form of a wire, strip or ribbon.

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6. A method as in claim 5, wherein the elongated magnetic member (31-3n) comprises a non-magnetic metal, preferably copper or aluminium.

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7. A method as in claim 5, wherein the elongated metallic member comprises a magnetic material, preferably iron, steel or an amorphous metal alloy.

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8. An article identification tag (30) comprising a plurality of electrically conductive members (31-3n), characterized in that each of the electrically conductive members (31-3n) has a unique predetermined diameter.

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9. A tag as in claim 8, wherein the electrically conductive members (31-3n) are formed as metallic wires, strips or ribbons.

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10. A tag as in claim 9, wherein the metallic wires, strips or ribbons (31-3n) comprise a non-magnetic metal, preferably copper or aluminium.

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11. A tag as in claim 9, wherein the metallic wires, strips or ribbons comprise a magnetic material, preferably iron, steel or an amorphous metal alloy.

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12. A tag as in any of claims 8 to 11, wherein at least some of the electrically conductive members (35, 36) have galvanic contact with each other.

5 13. A tag as in any of claims 8 to 12, wherein the electrically conductive members (34) are formed by an elongated element having sections of different diameters.